

REMARKS

Claims 42, 47-52, 57-59, and 66-71 are pending in the application. There are currently three independent claims, 42, 50, and 57 of which 42 and 50 have been amended. The amendments are supported by the specification and the various figures. In particular, figures 5, 6, and 9 and pages 18-2 and 24-25. Entry of the amendments is therefore respectfully requested. Reconsideration and further examination is also respectfully requested.

Claims 42, 47-52, and 57-59 are rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. Claims 66-68, which depend from claim 42 and claims 69-71, which depend from claim 50, have been found by the Examiner to comply with the enablement requirements of 35 USC §112, first paragraph. Thus to overcome the 35 USC § 112, first paragraph, rejections, the Applicant has taken the limitation of Claim 66 and added this as an additional limitation to claim 42, viz., "[p]roviding an input of energy to perform the recycling." Claim 66 has therefore been cancelled. Similarly, the claim limitation of claim 69 has added an additional limitation to claim 50, viz., "[p]roviding an input of energy to perform the recycling." Claim 69 has also been cancelled. Claims 42 and 50 have therefore been amended to overcome the objections by the Examiner under §112, first paragraph.

The Applicant therefore respectfully requests that the amendment be entered to remove the 35 USC §112, first paragraph, rejection in that the claims are now in a better form for appeal.

Claim 57 has also been rejected under 35 USC §112, first paragraph. However, in the Final Rejection dated June 18, 2007, the Examiner's objection to claims 42 and 50 involved the need for additional energy to be added to the system to vaporize the solvent. See the Final Office Action, dated June 18, 2007, page 2-3. However, claim 57 states in its entirety, :

57. (Previously Presented) A method for producing a vacuum, comprising:

providing a device comprising a closed solvent chamber, a solute chamber and a semi-permeable barrier separating the solvent chamber from the solute chamber;
filing the solvent chamber with a solvent;
filling the solute chamber with a solute solution;
flowing solvent from the solvent chamber to the membrane, such that solvent molecules effuse across the semi-permeable membrane into the solute solution, thereby leaving a void in which the vacuum develops in the solvent chamber.

No where in the currently claim 57 is the vaporization of the solvent mentioned or claimed and in addition, there is no mention of recycling the solvent or solute either. Clearly the operation of this portion of the invention, i.e., flowing of solvent across a semi-permeably membrane is well known and does not require the additional input of energy as the Examiner believes is required for claims 42 and 50. The Applicant believes that the rejection under 35 USC § 112, first paragraph, of claim 57 was an inadvertent error on the part of the Examiner

Accordingly, the Applicant believes that all claims now satisfy the enablement requirement under 35 USC § 112, first paragraph, and the Applicant respectfully requests that the Examiner withdraw this rejection and enter this amendment as it places the case in a better form for an appeal.

Claims 57-59 are rejected under 35 USC § 102(b) as being anticipated by Loeb, US Patent 3,906,250. In particular, the Examiner asserts that Loeb inherently teaches a closed solvent chamber as Loeb teaches that eventually the process will stop “because of dilution of sea water by the permeant.” Loeb, col. 4, lines 48-49. There is nothing inherent in this teaching that would teach a closed solvent system. All that Loeb teaches is that without replenishment of sea water in some manner, the system will stop as the concentration of the sea water decreases due to the influx of fresh water. This is not the same as having a closed chamber. An open solvent chamber, without the input of additional solvent will eventually stop as well. It is the addition of solvent to the solvent chamber, not the closure of the solvent chamber, that inherently leads to the system to stop producing energy.

In particular, the process will stop due to the flowing of the permeant, through the semi-

permeable membrane into the sea water. This does not imply a closed solvent chamber at all. In addition, the Examiner's recitation of features and corresponding functionality as set forth in the Office Action is insufficient to meet the requirements of 35 U.S.C. § 102. The Examiner needs to show that the features meet all of the limitations set forth in the applicant's claims. Section 2131 of the MPEP requires that "to anticipate a claim, the reference must teach every element of the claim." "The identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The applicant's claims specifically discuss the location of each feature. The Examiner has not met the burden of showing that the cited reference discloses the limitations concerning the specific location of each feature in claims. Therefore, as claim 57 is patentably distinguishable from Loeb the rejection is respectfully traversed.

Claims 42, 50-52, and 66-71 are rejected under 35 USC § 103(a) as being obvious over DE 3121968. As amended, claims 42 and 50 now include the additional limitation of "providing an input of energy to perform the recycling." As described by the Examiner, there is no additional energy added in the DE 3121968 patent for the solvent recycle. Rather, as the Examiner states: "The process of evaporation can be optimally selected from the various available methods. ... Using vacuum for evaporation particularly at ambient temperatures is known in the art." See Final Office Action, dated June 18, 2007, page 7. The Examiner then relies upon Loeb, although Loeb is not in combination with the DE 3121968 patent in this portion of the rejection, on the use of vacuum. The Applicant disputes that claim 6 or 7 call for the additional input of energy. In particular, claim 6 is that the seawater, i.e., the solvent itself can evaporate, see claim 5 as well in that energy is added to the solvent to evaporate it such that fluid flow is allowed from one chamber to the other. Thus, the additional energy does not appear

to be in the recycling of the solvent, but in providing energy for liquids to cross the semipermeable membrane and power the machine itself. This is clearly not the same as the additional energy added to the recycling process to process and recover solvent in the claimed invention as claimed in claim 42 and 50.

Claims 42, and 47-52 are rejected under 35 USC § 103(a) as being obvious over Loeb in view of DE 3121968. As amended, claims 42 and 50 now include the additional limitation of “providing an input of energy to perform the recycling; and recycling solute solution after exhausting the solute solution from the pressure chamber by separating solute molecules from solvent molecules in the solute solution by applying the vacuum in the solvent chamber to the solute solution while vaporizing solvent.” Loeb teaches the use of distillation and in particular, “The distillation plant 130 divides the unpressurized mixed solution from input 132 into a first output 134 of $V \text{ m}^3$ unpressurized concentrated solution having a high value of osmotic pressure, and a second output stream 136 of a diluted solution (π_{high}) in the form of a vapor.” Loeb, col. 13, lines 31-36. Thus, Loeb fails to teach each the use of a vacuum in separating solute molecules from solvent molecules as in the claimed invention. The unpressurized concentrated solution is not unpressurized as in a vacuum environment, but rather, that the solution is itself unpressurized. As discussed above, DE 3121968 fails to teach recycling of the solution using a vacuum and in fact Loeb fails to teach the use of recycling using a vacuum as well.

Accordingly, Loeb and DE 3121968 either alone or in combination fail to teach each and every limitation of the claimed invention, particularly with respect to independent claims 42 and 50. Claims 47-49 and 67-68, which further define the invention, depend from claim 42 and are patentable for at least the same reasons as claim 42. Claims 51-52 and 70-71, which further define the invention, depend from claim 50 and are patentable for at least the same reasons as

claim 50. Therefore, since a 35 USC 103 rejection can be maintained, reconsideration and allowance of all claims is respectfully requested.

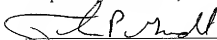
Applicants have made a diligent effort to place the claims in condition for allowance and in a better form for an appeal. In the event that the Examiner is unpersuaded by the Applicant's arguments, the Applicant respectfully requests that the Examiner enter the amendment for the purpose of removing the 35 USC§112, first paragraph, rejections. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Thomas Grodt Applicant's agent at (617) 345-3253 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

A one month extension of time has been requested herein. The Commissioner for Patents is therefore authorized to charge additional fees, in particular the fee of \$60.00 for a one-month extension of time under 37 CFR §1.17(a)(1) or credit overpayment to Deposit Account No. 03-2410, Order Number 41056.101

Date: 10-18-07

Respectfully Submitted,



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